

TECHNOLOGY ASSESSMENT AND FORECAST REPORT

ELECTRICAL CLASSES

1977 - December 2000



May 2001
U.S. PATENT AND TRADEMARK OFFICE
INFORMATION PRODUCTS DIVISION -- TAF BRANCH
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A TECHNOLOGY ASSESSMENT AND FORECAST REPORT

Technology Profile Report - ELECTRICAL Classes

Explanation of Data

This Technology Profile Report profiles the patent activity for U.S. utility patents * granted between **1977** and **December 2000** in ELECTRICAL technology discipline classes within the U.S. Patent Classification System (USPCS).

The report is generated by identifying appropriate Patent and Trademark Office (PTO) classes, i.e., those entirely or substantially pertinent to the technology discipline of interest. The patents in these classes are then included in the profile. This procedure results, in most cases, in the inclusion of the majority of patents relevant to the technology discipline and few, if any, patents which are not relevant. However, any patent listing provided should not be considered to be inclusive of all relevant patents, nor exclusive of all irrelevant patents.

Data Distribution By Date of Grant and By Date of Application

Parts A1 and A2

Part A1 distributes utility patent GRANT data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 distributes patent GRANT data by the year in which the patented application was filed ("Patents Granted By Date of Patent Application"). Parts A1 and A2 each provide patent counts (pages A1-1 and A2-1) and percent distributions (pages A1-2 and A2-2).

Patent data, as shown in the "**Pre 1987**" column, correspond to selected patents * in the data base which were granted during the period **1977 to 1986**.

Part B

Part B of this report distributes patent GRANT data for organizations that have received U.S. patents since 1977. Data are presented by the year in which the patent was granted ("Patents By Year of Grant") and the year the patented application was filed ("Patents by Year of Application").

DATA FOR THOSE APPLICATIONS WHICH WERE FILED BUT NEVER ISSUED (ROUGHLY 30% OF TOTAL FILINGS) ARE NOT INCLUDED IN THIS REPORT.

Since the average time period between filing for a patent and the issuing of the patent (i.e., a patent's "pendency") is now about 24 months, the patented application data for applications filed from **1997** to **DECEMBER 2000** are incomplete.** This is because a significant number of the applications filed from **1997** to **DECEMBER 2000**, which will ultimately become patents, were still pending in **DECEMBER 2000**. Since they had not yet become patents at the time this report was prepared, they were not included in this report.

Patented application data are of significant value since the date an application was filed more accurately reflects when the technology was developed. Additionally, fluctuations in data based on application date are much more likely to reflect changes in technological activity, since such fluctuations would for the most part be immune from changes in PTO processing

such as occurred in 1986 when the PTO issued fewer patents than would normally have been expected due to a lack of funds to print patents. Note that a patent's "pendency" can be quite variable from one patent to another thereby affecting the date of patent grant. Such variation in pendency is determined by many factors, including PTO workload (which varies between technologies), budget and manpower levels, patent printing schedules, etc.

"**Patents Granted By Date of Patent Application**", as shown in the "**Pre 1987**" column, correspond to patent grants in the report which were filed prior to **1987**.

Parts of the Report

Parts A1 and A2 present tables which show, by number and percent, the patent activity in the technology discipline. Part A1 presents data by year of patent grant ("Patents Granted By Date of Patent Grant"). Part A2 redistributes grant data by year of patent application ("Patents Granted By Date of Patent Application"). The location of patent origin is determined by the residence of the first-named inventor at the time of grant.

Patent ownership information reflects ownership at the time of patent grant and does not include subsequent changes in ownership. If more than one assignee was declared at the time of grant, the patent ownership is attributed to the first-named assignee. The U.S. and Foreign Corporations ownership categories count predominantly corporate patents; however, patents assigned to other organizations such as small businesses, nonprofit organizations, universities, etc. are also included in this category. While U.S. Government patent ownership includes only patents granted to the Federal Government, no such distinction is made for the Foreign Government ownership category.

Part B is a ranked listing of national and international organizations (i.e., corporations, universities, government agencies) which have received U.S. patents since **1977**.* Data line 1 for each listed organization ("Patents By Year of Grant") distributes counts of patent grants by year of grant. Data line 2 for each organization ("Patents By Year of Application") redistributes those same patent grants by year in which the patented applications were filed. Information on patent ownership reflects ownership at the time of patent grant. Although a substantial effort has been made to combine name variations into a single organizational name, many organizations continue to have patents listed under more than one organizational name.

* The term "patent", as used above, refers to "utility" patents. Other patent documents (i.e., design, plant and reissue patents, statutory invention registrations, defensive publications) are not included in this profile report.

** As of 12/31/00, utility patent application data are approximately 99% complete for utility patent applications filed in 1997, 61% complete for applications filed in 1998, and 19% complete for applications filed in 1999. They are essentially complete for applications filed prior to 1997.

Part A1
Patent Grants as Distributed By Year of Patent Grant

----- Patents Granted By Date Of Patent Grant (Granted: Jan 01, 1977 - Dec 31, 2000) -----

----- NUMBER OF PATENTS -----
 Pre 1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 Total

Total	128559	20556	18974	24369	22383	24303	24488	25260	28292	29854	34370	33959	50167	51400	53159	570093	
U.S. Origin	71396	9913	8907	11255	10522	11454	11388	11956	13761	14747	17430	17287	25552	26643	27841	290052	
Foreign Origin	57163	10643	10067	13114	11861	12849	13100	13304	14531	15107	16940	16672	24615	24757	25318	280041	
JAPAN	28288	6228	6016	8082	7572	8344	8836	8977	9721	9893	10875	10474	14973	14541	14350	167170	
GERMANY	9297	1362	1291	1484	1143	1200	1080	1021	1073	1096	1162	1175	1728	1804	2084	28000	
FRANCE	4516	693	649	790	681	730	701	688	698	735	783	715	959	985	1001	15324	
UNITED KINGDOM	4307	647	608	775	652	629	560	506	558	630	666	638	964	1014	1036	14190	
SOUTH KOREA	33	29	39	68	97	217	293	405	550	613	805	1000	1833	2035	1866	9883	
CANADA	1816	282	263	357	305	337	301	318	331	369	479	466	717	803	882	8026	
NETHERLANDS	2084	350	280	385	352	322	272	237	274	312	329	287	474	425	401	6784	
TAIWAN	114	58	80	106	158	149	196	225	246	332	411	503	885	964	1166	5593	
SWITZERLAND	1944	257	203	210	183	197	177	181	199	178	196	181	227	216	232	4781	
ITALY	994	191	151	195	178	149	142	168	163	135	229	222	327	275	352	3871	
SWEDEN	1001	133	107	148	105	91	99	104	150	165	237	214	301	424	501	3780	
ISRAEL	191	50	42	77	76	65	70	86	113	142	174	200	301	290	334	2211	
FINLAND	143	43	25	35	33	57	59	68	101	106	123	118	225	260	256	1652	
AUSTRALIA	308	49	45	69	57	68	55	52	53	62	53	57	102	87	116	1233	
BELGIUM	266	39	40	50	39	50	40	56	60	70	102	79	117	105	120	1233	
AUSTRIA	291	41	41	57	41	47	41	38	41	43	37	45	48	65	89	965	
U.S.S.R.	602	14	10	35	25	34	6	7	7	1	3	1	1	1	1	747	
DENMARK	192	21	21	35	20	20	18	13	15	17	20	21	27	59	53	552	
CHINA, HONG KONG S.A.R	78	15	16	23	21	21	26	22	19	26	26	31	59	61	69	513	
NORWAY	97	32	27	19	12	17	17	24	23	23	19	12	27	34	33	416	
SINGAPORE	9	1	6	5	12	17	17	19	20	43	40	52	60	80	364		
IRELAND	28	13	13	16	17	15	17	15	13	21	27	31	27	25	41	319	
SPAIN	40	7	18	14	7	12	13	17	15	8	20	27	35	18	37	288	
SOUTH AFRICA	80	10	7	12	12	14	7	7	10	11	22	17	19	11	15	254	
RUSSIAN FEDERATION									1	10	27	18	26	49	63	48	242
NEW ZEALAND	40	7	5	14	3	7	7	3	6	8	9	14	30	16	26	195	
HUNGARY	84	16	17	7	14	5	7	4	4	3	2	4	10	8	5	190	
CHINA P.REP.	4	5	12	7	13	9	7	7	8	15	9	14	18	16	15	159	
BRAZIL	18	4	5	5	3	6	4	6	5	3	7	5	11	10	8	100	
MEXICO	34	7	3	2	1	3	3	5	3	2	2	4	4	8	10	91	
INDIA	5			1	3	2	4	2	5	7	9	10	9	16	83		
BULGARIA	34	9	9	6	6	2	1	2							69		
CZECHOSLOVAKIA	43	5	1	3	2			1	3		1	4	2	1	1	67	
ARGENTINA	26	2	3	2	2	4	1	2	6	4	1	2	4	2	6	67	
MALAYSIA	1		1			5	1	4	5	2	1	8	3	12	14	57	
YUGOSLAVIA	13	6	5	4	8	8	4	2	1	1		1				53	
Others (68)	142	17	14	15	15	13	23	13	23	27	40	26	47	50	54	519	

Ownership:

U.S. Corporations	61772	9104	8082	10234	9419	10224	10164	10880	12470	13501	16076	16082	24043	25003	25920	262974
U.S. Government	3852	332	241	266	360	421	372	371	469	371	343	291	314	281	303	8587
U.S. Individuals	10386	1217	1214	1629	1465	1580	1487	1374	1495	1680	1877	1853	2421	2402	2478	34558
Foreign Corporations	47306	9210	8745	11397	10358	11330	11733	11974	13232	13617	15341	14990	22314	22767	23467	247781
Foreign Government	840	130	136	131	135	137	128	111	86	80	73	71	68	38	26	2190
Foreign Individuals	4403	563	556	712	646	611	604	550	540	605	660	672	1007	909	965	14003

Part A2
Patent Grants as Distributed By Year of Patent Application

----- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 2000) -----

	NUMBER OF PATENTED APPLICATIONS															
	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total

Total	167485	19638	22839	25160	26093	27434	28635	30030	37074	44108	48923	53210	30146	9101	217	570093
U.S. Origin	90149	9203	10484	11847	12358	12812	14060	15035	18407	22942	25252	27426	15485	4485	107	290052
Foreign Origin	77336	10435	12355	13313	13735	14622	14575	14995	18667	21166	23671	25784	14661	4616	110	280041
JAPAN	40295	6312	8048	8654	9174	9783	9685	9743	12206	13423	14098	15089	8101	2491	68	167170
GERMANY	11834	1222	1199	1199	1176	1143	1102	1044	1258	1492	1653	1890	1310	473	5	28000
FRANCE	5808	646	700	738	791	735	729	780	826	892	943	983	583	170		15324
UNITED KINGDOM	5618	641	628	676	581	610	551	639	744	861	937	1070	498	134	2	14190
SOUTH KOREA	94	63	87	240	287	484	509	565	834	1149	1948	2069	1239	307	8	9883
CANADA	2316	294	307	370	327	323	339	429	505	637	743	859	466	109	2	8026
NETHERLANDS	2707	292	349	338	292	263	291	306	375	386	474	445	211	53	2	6784
TAIWAN	211	104	101	167	165	227	265	288	386	583	787	968	898	430	13	5593
SWITZERLAND	2364	176	184	210	200	190	204	185	213	218	208	224	146	59		4781
ITALY	1328	146	177	166	171	182	153	169	219	271	282	317	204	84	2	3871
SWEDEN	1237	112	104	105	106	131	141	179	244	291	308	524	243	52	3	3780
ISRAEL	285	58	63	78	88	99	116	151	209	236	283	314	174	56	1	2211
FINLAND	203	40	27	49	57	78	102	109	119	160	307	280	91	30		1652
AUSTRALIA	406	50	73	53	62	64	60	68	53	77	109	84	59	15		1233
BELGIUM	350	32	48	39	45	61	61	69	93	101	130	106	82	15	1	1233
AUSTRIA	366	52	44	43	45	39	50	44	43	46	58	62	45	27	1	965
U.S.S.R.	627	24	31	24	17	11	4	4	2	1		1	1			747
DENMARK	226	29	35	14	20	19	12	21	20	25	38	55	30	8		552
CHINA, HONG KONG S.A.R.	101	22	16	36	12	31	25	22	33	40	46	66	40	23		513
NORWAY	155	20	12	13	18	29	25	22	15	21	20	37	23	6		416
SINGAPORE	10	2	6	5	7	12	24	26	46	45	52	72	43	13	1	364
IRELAND	55	12	15	16	15	17	18	15	40	27	28	38	20	3		319
SPAIN	60	12	11	9	13	12	22	14	28	24	33	24	16	9	1	288
SOUTH AFRICA	97	10	16	12	6	7	10	17	19	20	16	17	5	2		254
RUSSIAN FEDERATION						1	6	21	29	33	46	58	35	13		242
NEW ZEALAND	54	9	7	5	6	8	6	3	16	17	28	20	13	3		195
HUNGARY	113	8	13	9	6	6	3	4	2	8	7	7	4			190
CHINA P.REP.	20	7	10	8	10	9	8	11	15	13	13	19	13	3		159
BRAZIL	23	9	3	5	4	7	6	2	12	4	9	7	7	2		100
MEXICO	43	2	2	2	4	6	2	2	3	4	6	7	5	3		91
INDIA	6	1	2	2	4	4	3	8	8	13	9	11	7	5		83
BULGARIA	51	5	4	6		2	1									69
CZECHOSLOVAKIA	49	1	4			1	2	1	2	2	2	2		1		67
ARGENTINA	30	2	3	2	2	3	4	5	3	2	4	2	3	2		67
MALAYSIA	1	1		2	4	4	3	4	2	8	2	17	6	3		57
YUGOSLAVIA	21	9	6	7	5	1	2	1		1						53
Others (68)	172	10	20	11	15	20	31	24	45	35	44	40	40	12		519

Ownership:

U.S. Corporations	78754	8318	9499	10724	11053	11611	12756	13766	16956	21543	23843	25851	14240	3964	96	262974
U.S. Government	4652	193	266	339	366	413	402	431	358	355	265	287	204	55	1	8587
U.S. Individuals	12705	1342	1462	1593	1611	1505	1621	1649	2096	2247	2251	2337	1517	614	8	34558
Foreign Corporations	64806	9038	10904	11706	12296	13197	13188	13501	16875	19112	21604	23736	13528	4185	105	247781
Foreign Government	1104	123	112	149	135	123	80	82	78	67	72	39	23	3		2190
Foreign Individuals	5464	624	596	649	632	585	588	601	711	784	888	960	634	280	7	14003

----- Patents Granted By Date Of Patent Application (Granted: Jan 01, 1977 - Dec 31, 2000) -----

----- PERCENT OF PATENTED APPLICATIONS -----

	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
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Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
U.S. Origin	54	47	46	47	47	47	49	50	50	52	52	51	49	49	51	51
Foreign Origin	46	53	54	53	53	53	51	50	50	48	48	49	51	51	49	49
JAPAN	24	32	35	34	35	36	34	32	33	30	29	28	27	27	31	29
GERMANY	7	6	5	5	5	4	4	3	3	3	3	4	4	5	2	5
FRANCE	3	3	3	3	3	3	3	2	2	2	2	2	2	2	3	3
UNITED KINGDOM	3	3	3	3	2	2	2	2	2	2	2	2	1	1	1	2
SOUTH KOREA				1	1	2	2	2	2	3	4	4	4	3	4	2
CANADA	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1
NETHERLANDS	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1
TAIWAN				1	1	1	1	1	1	1	2	2	3	5	6	1
SWITZERLAND	1	1	1	1	1	1	1	1	1				1		1	1
ITALY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SWEDEN	1	1							1	1	1	1	1	1	1	1
ISRAEL								1	1	1	1	1	1	1	1	0
FINLAND											1	1				0
AUSTRALIA																0
BELGIUM																0
AUSTRIA																0
U.S.S.R.																0
DENMARK																0
CHINA, HONG KONG S.A.R																0
NORWAY																0
SINGAPORE																0
IRELAND																0
SPAIN																0
SOUTH AFRICA																0
RUSSIAN FEDERATION																0
NEW ZEALAND																0
HUNGARY																0
CHINA P.REP.																0
BRAZIL																0
MEXICO																0
INDIA																0
BULGARIA																0
CZECHOSLOVAKIA																0
ARGENTINA																0
MALAYSIA																0
YUGOSLAVIA																0
Others (68)																0

Ownership:

U.S. Corporations	47	42	42	43	42	42	45	46	46	49	49	49	47	44	44	46
U.S. Government	3	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2
U.S. Individuals	8	7	6	6	6	5	6	5	6	5	5	4	5	7	4	6
Foreign Corporations	39	46	48	47	47	48	46	45	46	43	44	45	45	46	48	43
Foreign Government	1	1		1	1											0
Foreign Individuals	3	3	3	3	2	2	2	2	2	2	2	2	2	3	3	2

Part B

Ranked Listing of Organizations with PATENT GRANTS
As Distributed By Year of Patent Grant
and As Distributed By Year of Patent Application

Technology Assessment and Forecast Report

ELECTRICAL CLASSES (12-31-2000)

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Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2000) Ranked List of Organizations with 200 or More Patents

Pre

1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

INTERNATIONAL BUSINESS MACHINES CORPORATION

Patents By Year of Grant:	2933	418	390	473	456	484	625	823	1004	1112	1545	1406	2227	2198	2233	18327
Patents By Year of Application:	3813	404	475	538	706	923	1181	982	1453	2024	2129	2456	1068	172	3	18327

CANON KABUSHIKI KAISHA

Patents By Year of Grant:	1797	510	465	590	546	529	697	601	714	709	999	917	1334	1176	1169	12753
Patents By Year of Application:	2769	464	506	620	595	734	768	845	1280	1453	1098	1152	356	110	3	12753

TOSHIBA CORPORATION

Patents By Year of Grant:	2349	576	519	691	668	749	732	749	733	742	692	659	894	922	943	12618
Patents By Year of Application:	3408	577	714	742	754	887	671	658	832	794	922	929	574	150	6	12618

HITACHI, LTD

Patents By Year of Grant:	2666	541	596	742	620	638	639	618	704	658	725	649	836	773	764	12169
Patents By Year of Application:	3888	635	739	702	715	720	657	640	701	816	728	703	366	153	6	12169

NEC CORPORATION

Patents By Year of Grant:	1024	332	318	440	407	389	407	509	754	858	869	871	1360	1481	1549	11568
Patents By Year of Application:	1701	326	425	426	384	547	736	662	1126	1007	1344	1705	931	243	5	11568

MOTOROLA, INC.

Patents By Year of Grant:	1687	339	256	301	317	501	534	571	660	814	878	842	1171	980	992	10843
Patents By Year of Application:	2227	249	301	473	555	634	671	779	976	1123	1105	1046	584	114	6	10843

MITSUBISHI DENKI KABUSHIKI KAISHA

Patents By Year of Grant:	918	328	313	506	560	605	606	607	699	711	738	671	858	795	762	9677
Patents By Year of Application:	1514	404	592	615	645	702	678	659	752	842	790	817	478	183	6	9677

U.S. PHILIPS CORPORATION

Patents By Year of Grant:	2729	506	442	587	479	496	401	357	317	418	396	396	588	575	575	9262
Patents By Year of Application:	3658	444	510	514	425	396	357	377	470	548	592	567	328	75	1	9262

SONY CORPORATION

Patents By Year of Grant:	1409	272	260	275	204	256	354	443	506	582	678	647	1081	1143	1102	9212
Patents By Year of Application:	1937	219	256	252	338	458	543	590	716	886	1087	1331	476	122	1	9212

FUJITSU LIMITED

Patents By Year of Grant:	778	190	194	224	214	284	316	343	469	586	723	757	1018	1009	943	8048
Patents By Year of Application:	1152	188	204	285	343	435	488	529	837	997	1045	981	456	104	4	8048

MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Patents By Year of Grant:	1103	192	162	232	200	281	371	437	538	579	573	507	706	740	772	7393
Patents By Year of Application:	1482	178	213	271	388	479	522	553	654	634	714	754	388	159	4	7393

---- Organizational Patenting

(Granted: Jan 01, 1977 - Dec 31, 2000) ----

Ranked List of Organizations with 200 or More Patents ----

	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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SIEMENS AKTIENGESELLSCHAFT

Patents By Year of Grant:	2627	384	371	410	327	302	260	210	212	247	267	282	397	434	558	7288
Patents By Year of Application:	3357	321	347	284	304	233	229	216	290	320	393	472	386	135	1	7288

GENERAL ELECTRIC COMPANY

Patents By Year of Grant:	2969	385	313	350	356	337	304	277	312	267	280	233	280	279	286	7228
Patents By Year of Application:	3609	316	324	353	332	285	321	270	299	281	289	270	213	65	1	7228

AT&T CORP.

Patents By Year of Grant:	2561	288	282	269	299	351	283	282	446	484	425	44	145	270	286	6715
Patents By Year of Application:	3158	214	230	362	356	297	402	517	364	181	197	352	73	12	0	6715

TEXAS INSTRUMENTS, INCORPORATED

Patents By Year of Grant:	1061	199	140	260	188	257	240	225	317	334	425	423	473	446	482	5470
Patents By Year of Application:	1462	170	223	242	255	260	278	378	477	539	389	477	245	75	0	5470

EASTMAN KODAK COMPANY

Patents By Year of Grant:	569	146	207	206	311	396	343	365	356	310	358	358	467	410	331	5133
Patents By Year of Application:	813	184	270	377	383	410	422	286	354	349	504	437	270	73	1	5133

SAMSUNG ELECTRONICS CO., LTD.

Patents By Year of Grant:	2	4	4	20	41	111	187	239	326	323	366	424	929	1118	988	5082
Patents By Year of Application:	10	16	32	151	173	291	302	318	359	469	1106	1037	662	149	7	5082

SHARP KABUSHIKI KAISHA (SHARP CORPORATION)

Patents By Year of Grant:	664	203	180	268	261	293	295	277	352	299	288	302	445	389	436	4952
Patents By Year of Application:	1079	180	295	305	294	318	331	315	326	370	433	405	244	54	3	4952

XEROX CORPORATION

Patents By Year of Grant:	1351	117	128	115	110	153	210	285	312	302	402	333	451	375	275	4919
Patents By Year of Application:	1571	110	115	141	228	284	286	360	384	409	377	313	267	72	2	4919

HEWLETT-PACKARD COMPANY

Patents By Year of Grant:	360	91	92	154	137	207	208	208	287	291	307	311	521	552	561	4287
Patents By Year of Application:	546	121	149	215	211	251	264	266	318	372	589	614	294	75	2	4287

RCA CORPORATION

Patents By Year of Grant:	3173	398	90	1	0	1	0	0	0	0	0	0	0	0	0	3663
Patents By Year of Application:	3637	25	0	1	0	0	0	0	0	0	0	0	0	0	0	3663

INTEL CORPORATION

Patents By Year of Grant:	115	12	19	34	34	47	50	98	183	251	393	371	658	657	692	3614
Patents By Year of Application:	143	35	36	41	55	92	178	286	419	560	706	692	309	60	2	3614

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ELECTRICAL CLASSES (12-31-2000)

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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RICOH COMPANY, LTD.

Patents By Year of Grant:	637	113	106	175	200	208	243	191	208	189	212	251	297	292	290	3612
Patents By Year of Application:	841	119	211	235	248	214	207	202	237	273	305	267	176	77	0	3612

FUJI PHOTO FILM CO., LTD

Patents By Year of Grant:	530	190	257	406	294	255	214	179	145	142	146	180	208	216	196	3558
Patents By Year of Application:	991	267	327	277	225	199	177	149	156	203	243	206	111	26	1	3558

WESTINGHOUSE ELECTRIC CORP.

Patents By Year of Grant:	2066	256	139	170	192	135	133	127	119	53	47	23	26	3	0	3489
Patents By Year of Application:	2431	150	195	160	138	142	95	68	65	22	14	9	0	0	0	3489

LUCENT TECHNOLOGIES INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	235	595	767	863	1027	3487	
Patents By Year of Application:	0	0	0	0	1	5	8	52	324	705	749	896	620	126	1	3487

UNITED STATES OF AMERICA, NAVY

Patents By Year of Grant:	1423	65	50	65	140	173	126	131	160	150	136	116	150	141	159	3185
Patents By Year of Application:	1737	37	76	79	159	144	143	139	135	147	119	149	97	24	0	3185

MINOLTA CAMERA CO., LTD.

Patents By Year of Grant:	521	64	122	258	285	250	215	180	116	78	115	107	222	234	192	2959
Patents By Year of Application:	660	192	294	304	226	201	138	91	128	121	186	227	152	38	1	2959

UNISYS CORPORATION

Patents By Year of Grant:	1492	110	78	79	68	80	78	46	74	97	121	100	114	83	82	2702
Patents By Year of Application:	1682	81	77	88	58	57	73	103	115	126	105	94	38	5	0	2702

ADVANCED MICRO DEVICES, INC.

Patents By Year of Grant:	85	69	74	75	72	72	62	74	67	105	146	203	407	533	580	2624
Patents By Year of Application:	255	44	66	77	91	51	68	111	153	291	393	637	290	92	5	2624

HUGHES AIRCRAFT COMPANY

Patents By Year of Grant:	572	119	148	193	165	227	195	193	234	203	185	76	26	5	1	2542
Patents By Year of Application:	885	144	170	187	204	216	244	203	155	103	29	2	0	0	0	2542

NIKON CORPORATION

Patents By Year of Grant:	381	72	50	47	54	58	80	98	78	165	307	308	362	215	168	2443
Patents By Year of Application:	481	42	43	67	60	104	82	120	269	441	297	297	110	28	2	2443

OLYMPUS OPTICAL CO., LTD.

Patents By Year of Grant:	788	60	76	95	93	80	103	105	147	123	132	110	136	110	136	2294
Patents By Year of Application:	913	63	97	85	108	124	125	164	155	135	125	104	65	31	0	2294

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	Pre															
	1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL

PIONEER ELECTRONIC CORPORATION

Patents By Year of Grant:	435	93	87	153	135	154	210	178	141	127	87	94	120	126	118	2258
Patents By Year of Application:	604	119	164	157	200	169	155	123	106	97	126	140	81	15	2	2258

ROBERT BOSCH GMBH

Patents By Year of Grant:	630	88	68	58	50	71	82	83	94	100	106	69	111	166	208	1984
Patents By Year of Application:	777	57	48	69	87	81	102	103	102	101	106	155	148	48	0	1984

MICRON TECHNOLOGY, INC.

Patents By Year of Grant:	1	0	0	3	19	21	45	66	55	24	81	157	334	522	653	1981
Patents By Year of Application:	1	0	13	17	33	66	73	34	46	192	310	570	403	218	5	1981

DIGITAL EQUIPMENT CORPORATION

Patents By Year of Grant:	109	19	33	98	114	122	185	230	245	171	157	129	157	120	91	1980
Patents By Year of Application:	165	109	116	192	178	184	238	183	160	144	142	125	41	3	0	1980

THOMSON-CSF

Patents By Year of Grant:	964	106	100	88	93	109	84	64	62	71	41	41	54	55	40	1972
Patents By Year of Application:	1177	74	84	103	97	73	67	56	58	57	43	44	35	4	0	1972

SUN MICROSYSTEMS, INC.

Patents By Year of Grant:	3	2	3	7	13	21	49	59	65	59	108	147	415	539	448	1938
Patents By Year of Application:	10	3	14	36	51	50	70	59	111	290	526	510	173	35	0	1938

HONEYWELL INC.

Patents By Year of Grant:	619	95	87	125	101	94	87	83	97	110	79	69	80	70	53	1849
Patents By Year of Application:	808	86	106	117	83	87	95	109	81	75	98	73	22	9	0	1849

TELEFONAKTIEBOLAGET LM ERICSSON

Patents By Year of Grant:	174	31	27	25	23	18	34	44	61	76	140	104	189	338	434	1718
Patents By Year of Application:	231	17	23	23	45	50	57	88	122	206	217	438	179	22	0	1718

NATIONAL SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	285	36	25	47	47	74	77	86	108	141	171	158	143	157	144	1699
Patents By Year of Application:	337	36	47	72	81	89	104	125	170	224	134	127	116	34	3	1699

ROCKWELL INTERNATIONAL CORPORATION

Patents By Year of Grant:	804	71	62	65	58	75	52	72	79	66	75	47	69	63	11	1669
Patents By Year of Application:	931	64	56	80	66	66	76	77	69	83	53	40	7	1	0	1669

UNITED STATES OF AMERICA, ARMY

Patents By Year of Grant:	852	68	44	60	44	58	52	49	73	81	68	58	58	46	57	1668
Patents By Year of Application:	968	32	48	58	41	57	63	80	80	78	57	43	43	20	0	1668

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Pre

1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

ASAHI KOGAKU KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	316	16	15	33	58	101	115	122	132	89	86	89	157	152	115	1596
Patents By Year of Application:	342	22	52	94	127	131	116	98	102	108	125	171	79	29	0	1596

VICTOR COMPANY OF JAPAN, LIMITED

Patents By Year of Grant:	609	118	64	55	49	76	72	68	52	42	47	53	70	74	73	1522
Patents By Year of Application:	787	46	48	70	84	64	59	42	53	60	84	80	40	5	0	1522

NORTHERN TELECOM LIMITED

Patents By Year of Grant:	381	70	51	59	53	58	51	52	63	69	90	56	184	213	67	1517
Patents By Year of Application:	499	41	47	72	59	49	44	91	81	96	227	188	21	2	0	1517

SANYO ELECTRIC CO., LTD.

Patents By Year of Grant:	210	58	43	58	70	85	70	65	73	61	81	92	163	146	139	1414
Patents By Year of Application:	305	50	71	86	80	63	52	77	107	105	163	139	87	29	0	1414

MICROSOFT CORPORATION

Patents By Year of Grant:	0	0	1	2	3	2	7	15	23	46	97	194	330	348	342	1410
Patents By Year of Application:	1	2	4	11	11	7	64	66	148	248	341	363	118	25	1	1410

MURATA MANUFACTURING CO., LTD.

Patents By Year of Grant:	171	40	44	42	48	53	57	42	54	72	85	95	145	202	213	1363
Patents By Year of Application:	237	39	54	50	56	39	61	71	92	98	168	206	139	50	3	1363

NCR CORPORATION

Patents By Year of Grant:	327	67	51	72	52	58	59	77	71	40	30	62	129	154	105	1354
Patents By Year of Application:	445	52	63	75	70	85	70	45	32	94	127	147	44	5	0	1354

FUJI XEROX CO., LTD.

Patents By Year of Grant:	204	19	15	17	21	36	75	97	99	90	116	93	192	150	106	1330
Patents By Year of Application:	239	13	24	31	101	85	102	88	94	151	188	140	55	19	0	1330

UNITED STATES OF AMERICA, AIR FORCE

Patents By Year of Grant:	606	91	50	38	45	61	53	65	64	38	49	45	36	36	28	1305
Patents By Year of Application:	760	31	35	54	56	60	63	55	45	50	37	37	19	3	0	1305

TEKTRONIX INC.

Patents By Year of Grant:	343	124	153	126	73	66	50	50	31	48	42	35	41	54	43	1279
Patents By Year of Application:	596	105	99	75	54	46	48	37	43	51	33	60	27	5	0	1279

ALPS ELECTRIC CO., LTD.

Patents By Year of Grant:	293	116	137	98	61	60	45	29	26	27	22	47	61	108	127	1257
Patents By Year of Application:	501	106	73	63	43	42	29	23	32	48	71	126	66	31	3	1257

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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RAYTHEON COMPANY

Patents By Year of Grant:	437	63	32	46	58	55	64	56	40	33	7	15	72	149	125	1252
Patents By Year of Application:	559	40	51	63	39	69	28	42	19	28	91	151	53	19	0	1252

COMPAQ COMPUTER CORPORATION, INC.

Patents By Year of Grant:	1	0	2	9	14	18	52	43	55	76	82	115	236	242	300	1245
Patents By Year of Application:	3	7	19	33	40	56	61	68	89	136	286	289	133	25	0	1245

OKI ELECTRIC INDUSTRY CO., LTD.

Patents By Year of Grant:	83	32	38	78	58	66	72	81	85	65	71	54	105	165	187	1240
Patents By Year of Application:	143	54	80	64	67	96	68	67	80	87	90	198	118	27	1	1240

SEIKO EPSON CORPORATION

Patents By Year of Grant:	16	17	15	26	28	45	71	94	88	86	111	133	177	148	176	1231
Patents By Year of Application:	47	23	30	57	72	79	99	100	133	172	146	141	96	36	0	1231

EATON CORPORATION

Patents By Year of Grant:	313	53	32	48	58	35	36	41	63	76	89	72	99	117	97	1229
Patents By Year of Application:	392	45	48	40	45	46	45	84	93	74	88	97	87	44	1	1229

UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY

Patents By Year of Grant:	554	62	61	60	66	65	81	56	83	40	22	17	17	15	13	1212
Patents By Year of Application:	690	51	52	68	67	77	57	63	31	17	14	10	13	2	0	1212

HARRIS CORP.

Patents By Year of Grant:	314	70	43	57	53	46	45	46	56	56	77	84	100	102	58	1207
Patents By Year of Application:	437	39	50	48	42	62	66	42	93	89	105	74	41	19	0	1207

YAMAHA CORPORATION

Patents By Year of Grant:	0	0	2	52	78	83	84	122	88	103	110	103	144	137	74	1180
Patents By Year of Application:	8	44	68	104	120	85	96	104	98	121	126	119	62	23	2	1180

NISSAN MOTOR COMPANY, LIMITED

Patents By Year of Grant:	344	61	48	70	99	88	83	54	45	42	29	34	45	50	71	1163
Patents By Year of Application:	472	61	92	91	76	67	49	27	33	47	35	49	48	16	0	1163

FANUC LTD.

Patents By Year of Grant:	141	89	59	110	105	112	105	84	63	62	52	37	56	39	35	1149
Patents By Year of Application:	288	77	102	143	108	85	58	49	71	64	25	49	24	6	0	1149

GENERAL MOTORS CORPORATION

Patents By Year of Grant:	416	68	64	63	57	60	48	64	44	41	57	41	42	42	39	1146
Patents By Year of Application:	517	48	60	65	62	72	56	42	56	55	41	28	27	17	0	1146

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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APPLE COMPUTER, INC.

Patents By Year of Grant:	15	3	6	6	17	17	28	45	50	101	165	197	247	165	83	1145
Patents By Year of Application:	25	12	8	19	32	46	80	134	173	289	194	104	24	5	0	1145

NIPPONDENSO CO., LTD.

Patents By Year of Grant:	237	65	48	42	26	32	26	41	54	56	120	131	165	43	14	1100
Patents By Year of Application:	353	32	32	39	21	38	55	67	108	160	170	22	3	0	0	1100

KONICA CORPORATION

Patents By Year of Grant:	245	29	35	62	72	77	78	68	85	57	67	50	55	58	59	1097
Patents By Year of Application:	306	53	50	67	93	77	75	74	53	74	54	54	53	13	1	1097

CASIO COMPUTER CO. LTD.

Patents By Year of Grant:	189	70	63	49	49	81	72	58	54	51	77	47	64	69	71	1064
Patents By Year of Application:	321	37	51	92	71	58	62	58	75	66	62	76	30	5	0	1064

GTE PRODUCTS CORPORATION

Patents By Year of Grant:	638	48	53	75	53	64	42	38	22	4	1	0	3	0	2	1043
Patents By Year of Application:	732	61	64	53	44	48	37	4	0	0	0	0	0	0	0	1043

BROTHER KOGYO KABUSHIKI KAISHA

Patents By Year of Grant:	23	27	29	64	96	137	95	77	60	37	56	66	79	97	75	1018
Patents By Year of Application:	76	56	91	90	143	87	51	47	62	76	89	93	47	10	0	1018

LSI LOGIC CORPORATION

Patents By Year of Grant:	1	1	4	6	5	9	16	26	19	46	85	116	175	262	238	1009
Patents By Year of Application:	4	7	9	6	16	18	37	57	69	162	232	256	126	10	0	1009

ZENITH ELECTRONICS CORPORATION

Patents By Year of Grant:	465	78	69	45	41	46	44	39	27	26	30	30	25	21	21	1007
Patents By Year of Application:	593	52	42	44	44	45	43	22	26	30	34	24	6	2	0	1007

HONDA GIKEN KOGYO KABUSHIKI KAISHA (HONDA MOTOR CO., LTD.)

Patents By Year of Grant:	87	31	23	51	41	38	43	51	55	62	69	90	113	120	125	999
Patents By Year of Application:	149	34	43	57	36	40	64	70	70	108	82	118	100	28	0	999

MINNESOTA MINING AND MANUFACTURING COMPANY

Patents By Year of Grant:	280	31	32	63	44	42	42	57	78	74	60	44	65	23	11	946
Patents By Year of Application:	338	41	57	38	56	55	65	68	67	77	45	35	2	2	0	946

TRW INC.

Patents By Year of Grant:	233	28	28	37	29	19	16	32	54	52	42	41	68	112	131	922
Patents By Year of Application:	292	37	27	24	17	31	58	48	40	53	84	104	85	22	0	922

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	Pre															
	1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL

ERICSSON, INC.

Patents By Year of Grant:	0	1	0	0	0	0	0	0	0	4	29	66	199	275	300	874
Patents By Year of Application:	1	0	0	0	0	2	3	9	38	93	304	290	118	16	0	874

POLAROID CORPORATION

Patents By Year of Grant:	496	49	43	51	23	20	19	16	11	17	19	17	31	30	23	865
Patents By Year of Application:	575	42	35	24	18	21	8	14	29	27	24	27	19	2	0	865

FORD MOTOR COMPANY

Patents By Year of Grant:	154	19	15	32	30	40	44	60	72	76	92	78	65	47	28	852
Patents By Year of Application:	186	28	34	32	44	58	77	79	97	87	48	51	24	7	0	852

PITNEY-BOWES, INC.

Patents By Year of Grant:	269	35	24	64	34	41	37	27	36	31	27	42	70	47	51	835
Patents By Year of Application:	363	42	38	32	38	29	31	38	50	58	51	49	14	2	0	835

BOEING COMPANY

Patents By Year of Grant:	228	39	47	58	78	73	44	35	27	28	35	31	43	32	32	830
Patents By Year of Application:	339	49	62	79	48	41	19	27	29	60	30	23	18	6	0	830

MITA INDUSTRIAL COMPANY LTD.

Patents By Year of Grant:	103	28	25	28	33	45	44	55	52	54	67	56	125	54	17	786
Patents By Year of Application:	150	33	22	42	54	43	63	59	55	73	79	83	23	7	0	786

UNITED STATES OF AMERICA, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Patents By Year of Grant:	241	36	24	35	43	49	43	47	65	43	40	34	35	18	24	777
Patents By Year of Application:	294	32	43	54	35	54	46	71	42	35	27	22	22	0	0	777

UNITED TECHNOLOGIES CORPORATION

Patents By Year of Grant:	341	53	35	44	36	38	53	37	30	41	23	19	6	12	9	777
Patents By Year of Application:	427	40	43	37	36	46	36	33	43	8	11	10	7	0	0	777

SEAGATE TECHNOLOGY, INCORPORATED

Patents By Year of Grant:	7	4	6	14	18	29	38	53	44	32	48	76	117	126	162	774
Patents By Year of Application:	15	11	18	26	57	35	37	41	68	92	96	171	94	13	0	774

SUMITOMO ELECTRIC INDUSTRIES CO., LTD.

Patents By Year of Grant:	67	14	17	37	38	51	68	70	74	90	68	45	47	39	47	772
Patents By Year of Application:	95	34	41	47	53	74	91	71	96	51	43	40	28	8	0	772

NIPPON TELEGRAPH & TELEPHONE CORP.

Patents By Year of Grant:	241	18	31	27	27	25	36	35	28	39	45	50	67	49	49	767
Patents By Year of Application:	291	17	37	16	34	37	35	31	55	61	66	59	22	6	0	767

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1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

ITT CORPORATION

Patents By Year of Grant:	490	42	10	15	30	20	24	24	34	29	22	12	7	5	2	766
Patents By Year of Application:	553	7	21	28	23	22	29	29	20	25	6	2	1	0	0	766

SGS-THOMSON MICROELECTRONICS S.R.L.

Patents By Year of Grant:	0	0	0	12	40	34	41	41	40	38	96	102	157	91	58	750
Patents By Year of Application:	0	4	27	46	48	43	40	49	93	119	119	128	33	0	1	750

TOYOTA JIDOSHA K.K.

Patents By Year of Grant:	121	37	44	58	20	15	25	30	16	24	41	38	77	105	82	733
Patents By Year of Application:	225	30	20	20	30	22	18	27	42	46	78	102	57	16	0	733

VLSI TECHNOLOGY, INC.

Patents By Year of Grant:	2	0	1	6	6	22	38	50	59	69	83	73	115	106	89	719
Patents By Year of Application:	4	4	6	22	52	58	61	52	78	94	123	110	47	8	0	719

ROHM COMPANY LIMITED

Patents By Year of Grant:	3	0	0	0	4	13	8	39	127	119	68	74	86	77	88	706
Patents By Year of Application:	3	0	0	14	9	24	140	96	96	81	83	81	61	17	1	706

FUJI ELECTRIC CO., LTD.

Patents By Year of Grant:	79	28	30	38	37	37	37	39	49	54	71	51	45	57	38	690
Patents By Year of Application:	126	37	41	28	36	54	46	56	70	66	38	53	25	14	0	690

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	127	10	11	34	38	36	54	42	41	47	50	44	60	54	42	690
Patents By Year of Application:	159	21	35	55	46	48	35	46	57	56	49	47	25	11	0	690

DAEWOO ELECTRONICS COMPANY, LTD.

Patents By Year of Grant:	1	0	0	0	1	0	2	0	12	41	89	126	173	164	79	688
Patents By Year of Application:	1	0	0	2	1	0	5	36	108	149	154	163	67	2	0	688

HYUNDAI ELECTRONICS INDUSTRIES CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	6	8	12	21	24	65	84	120	148	197	685
Patents By Year of Application:	0	0	0	3	10	17	19	23	53	88	131	161	114	66	0	685

UNIVERSITY OF CALIFORNIA, THE REGENTS OF

Patents By Year of Grant:	50	17	18	24	18	21	20	32	52	56	86	53	93	73	71	684
Patents By Year of Application:	86	15	21	28	26	33	39	55	79	103	87	57	46	9	0	684

ALLIED-SIGNAL INC.

Patents By Year of Grant:	145	71	32	45	42	34	45	37	59	41	29	13	22	22	42	679
Patents By Year of Application:	250	34	33	44	39	49	45	52	32	16	20	33	24	8	0	679

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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ALCATEL N. V.

Patents By Year of Grant:	0	7	20	36	30	27	47	54	83	65	84	62	89	37	8	649
Patents By Year of Application:	33	24	22	31	57	60	81	57	86	93	89	14	2	0	0	649

SGS-THOMSON MICROELECTRONICS S.A.

Patents By Year of Grant:	0	0	1	20	34	30	25	27	35	49	56	80	110	105	75	647
Patents By Year of Application:	1	9	41	24	30	32	28	69	63	112	87	109	41	1	0	647

GOLDSTAR COMPANY, LTD.

Patents By Year of Grant:	1	11	14	21	22	27	47	64	102	115	118	59	33	10	1	645
Patents By Year of Application:	27	22	22	19	46	87	93	110	139	42	29	9	0	0	0	645

COMMISSARIAT A L'ENERGIE ATOMIQUE

Patents By Year of Grant:	198	41	46	29	29	24	37	22	30	25	28	39	41	31	24	644
Patents By Year of Application:	268	35	32	31	28	32	26	20	38	40	42	29	17	6	0	644

CITIZEN WATCH CO., LTD.

Patents By Year of Grant:	364	39	21	11	11	11	10	7	9	7	18	19	24	42	45	638
Patents By Year of Application:	420	8	11	15	13	7	6	10	19	24	22	43	35	5	0	638

SCHLUMBERGER TECHNOLOGY CORPORATION

Patents By Year of Grant:	176	26	22	43	33	32	21	31	35	34	36	25	25	33	60	632
Patents By Year of Application:	237	24	22	37	31	31	33	33	38	30	28	49	28	11	0	632

INDUSTRIAL TECHNOLOGY RESEARCH INSTITUTE, TAIWAN

Patents By Year of Grant:	0	2	2	9	10	16	16	40	43	64	50	55	119	101	98	625
Patents By Year of Application:	2	9	10	14	13	42	52	53	56	79	95	108	67	22	3	625

NOKIA MOBILE PHONES LTD.

Patents By Year of Grant:	0	0	0	0	0	5	15	26	42	42	40	42	103	148	160	623
Patents By Year of Application:	0	0	0	0	19	25	51	40	39	67	149	172	49	12	0	623

BRITISH TELECOMMUNICATION, PLC

Patents By Year of Grant:	24	17	23	44	48	38	36	21	33	49	41	34	67	76	66	617
Patents By Year of Application:	78	35	35	48	33	27	34	51	61	41	80	50	41	3	0	617

NORTH AMERICAN PHILIPS CORPORATION

Patents By Year of Grant:	109	34	32	62	75	74	77	47	46	28	16	5	1	3	0	609
Patents By Year of Application:	177	43	74	82	67	56	55	31	12	12	0	0	0	0	0	609

SQUARE D COMPANY

Patents By Year of Grant:	138	17	24	24	42	36	47	34	29	42	30	31	42	43	16	595
Patents By Year of Application:	179	22	33	49	45	34	36	31	40	39	35	29	22	1	0	595

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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NIPPON GAKKI SEIZO KABUSHIKI KAISHA

Patents By Year of Grant:	471	50	48	10	6	1	1	0	0	0	0	0	0	0	0	587
Patents By Year of Application:	563	17	3	3	0	1	0	0	0	0	0	0	0	0	0	587

SUNDSTRAND CORPORATION

Patents By Year of Grant:	124	24	27	41	63	89	28	25	32	21	31	13	28	19	4	569
Patents By Year of Application:	170	33	40	109	53	20	23	38	23	14	24	14	8	0	0	569

DAINIPPON SCREEN MFG. CO., LTD.

Patents By Year of Grant:	144	68	28	40	26	39	35	37	25	26	15	13	25	27	15	563
Patents By Year of Application:	243	27	34	42	20	58	22	24	16	21	25	19	12	0	0	563

LG SEMICON CO., LTD.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	15	59	137	195	154	560
Patents By Year of Application:	0	0	0	0	0	0	0	5	68	131	195	134	27	0	0	560

THOMSON CONSUMER ELECTRONICS, INC.

Patents By Year of Grant:	0	0	0	9	13	26	59	48	60	65	69	60	65	60	26	560
Patents By Year of Application:	0	0	18	13	56	51	65	43	101	77	81	46	9	0	0	560

LG ELECTRONICS INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	15	65	146	163	168	557
Patents By Year of Application:	0	0	0	0	0	0	1	1	0	114	141	196	83	20	1	557

ANALOG DEVICES, INC.

Patents By Year of Grant:	46	10	9	18	15	23	27	16	33	53	60	68	66	57	50	551
Patents By Year of Application:	63	13	16	25	23	18	29	39	67	92	70	48	39	9	0	551

SEMICONDUCTOR ENERGY LABORATORY CO., LTD.

Patents By Year of Grant:	8	9	9	21	25	25	29	28	31	20	51	49	59	92	87	543
Patents By Year of Application:	26	21	28	25	21	35	38	26	57	68	64	84	38	11	1	543

BELL COMMUNICATIONS RESEARCH, INC.

Patents By Year of Grant:	3	21	31	46	38	56	61	49	62	53	43	28	36	14	1	542
Patents By Year of Application:	47	36	50	53	54	56	56	67	45	35	36	6	1	0	0	542

HONEYWELL INFORMATION SYSTEMS INC.

Patents By Year of Grant:	502	29	7	1	0	1	1	0	0	0	0	0	0	0	0	541
Patents By Year of Application:	538	1	0	2	0	0	0	0	0	0	0	0	0	0	0	541

CIRRUS LOGIC, INC.

Patents By Year of Grant:	0	0	0	0	3	1	4	2	13	32	63	84	127	108	100	537
Patents By Year of Application:	0	2	1	2	4	2	14	38	59	143	112	119	38	3	0	537

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	Pre															
	1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL

AGFA-GEVAERT, AG

Patents By Year of Grant:	341	13	13	18	16	12	12	17	14	11	3	11	17	15	6	519
Patents By Year of Application:	362	17	16	16	5	14	25	9	5	14	12	18	5	1	0	519

PHILIPS ELECTRONICS NORTH AMERICA CORP.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	7	29	65	65	109	107	119	501
Patents By Year of Application:	0	0	0	0	0	2	0	37	75	87	112	112	62	14	0	501

SGS-THOMSON MICROELECTRONICS, INC.

Patents By Year of Grant:	0	0	3	5	8	18	38	30	81	74	101	67	66	1	2	494
Patents By Year of Application:	2	5	4	20	36	46	64	73	103	81	49	11	0	0	0	494

DELL USA, L.P.

Patents By Year of Grant:	0	0	0	0	0	0	1	6	17	52	79	80	94	80	79	488
Patents By Year of Application:	0	0	0	1	7	14	2	58	67	112	70	98	39	19	1	488

GTE LABORATORIES, INC.

Patents By Year of Grant:	199	39	26	25	31	36	28	20	19	7	12	7	8	14	13	484
Patents By Year of Application:	263	22	31	31	37	22	18	15	7	13	6	11	8	0	0	484

DELCO ELECTRONICS CORPORATION

Patents By Year of Grant:	0	0	6	18	26	23	24	18	32	59	59	55	59	63	34	476
Patents By Year of Application:	2	11	16	34	26	26	24	43	80	60	61	53	31	9	0	476

LITTON SYSTEMS INC.

Patents By Year of Grant:	141	23	18	19	12	9	12	14	31	43	45	25	20	29	31	472
Patents By Year of Application:	181	12	20	8	12	15	28	47	46	23	18	32	27	3	0	472

YAZAKI CORP.

Patents By Year of Grant:	3	3	10	26	21	10	24	25	27	28	41	42	74	70	68	472
Patents By Year of Application:	11	16	18	25	20	34	18	35	45	34	76	75	46	18	1	472

XILINX, INC.

Patents By Year of Grant:	0	4	4	7	1	2	4	2	22	20	55	60	76	92	114	463
Patents By Year of Application:	8	5	3	4	2	7	10	21	37	82	73	103	72	32	4	463

NORTEL NETWORKS CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	0	86	374	460
Patents By Year of Application:	0	0	0	0	0	0	0	0	1	3	52	273	119	12	0	460

KOKUSAI DENSHIN DENWA KABUSHIKI KAISHA

Patents By Year of Grant:	159	20	23	27	23	11	16	12	15	13	21	18	28	40	25	451
Patents By Year of Application:	204	16	24	17	11	13	12	18	19	29	31	41	15	1	0	451

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Pre

1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

TDK CORPORATION

Patents By Year of Grant:	23	15	29	37	25	26	21	20	24	24	24	22	33	50	76	449
Patents By Year of Application:	63	25	32	30	27	16	19	25	31	25	24	56	58	17	1	449

OMRON TETEISI ELECTRONICS CO.

Patents By Year of Grant:	147	57	39	60	48	46	25	16	5	2	1	0	0	0	0	446
Patents By Year of Application:	247	51	52	47	25	12	6	5	1	0	0	0	0	0	0	446

DEUTSCHE THOMSON-BRANDT GMBH

Patents By Year of Grant:	7	13	15	45	25	34	15	35	36	47	24	23	35	44	41	439
Patents By Year of Application:	37	21	59	29	6	24	42	54	31	35	42	44	10	5	0	439

SEIKO INSTRUMENTS INC.

Patents By Year of Grant:	1	1	11	16	30	30	41	24	30	36	37	32	39	41	69	438
Patents By Year of Application:	5	23	29	31	38	30	27	48	48	31	37	36	44	11	0	438

QUALCOMM, INC.

Patents By Year of Grant:	0	0	0	1	7	4	9	8	8	21	48	45	82	105	98	436
Patents By Year of Application:	1	1	5	5	8	9	8	22	54	72	112	92	37	9	1	436

CATERPILLAR INC.

Patents By Year of Grant:	68	7	7	5	11	11	11	14	18	35	41	49	36	70	50	433
Patents By Year of Application:	80	8	6	6	21	17	18	39	37	51	59	49	32	10	0	433

NOKIA TELECOMMUNICATIONS OY

Patents By Year of Grant:	0	0	0	0	0	0	0	0	5	23	40	47	91	116	110	432
Patents By Year of Application:	0	0	0	0	0	0	1	25	35	63	150	114	32	12	0	432

BBC BROWN, BOVERI & COMPANY, LIMITED

Patents By Year of Grant:	338	47	26	13	4	0	0	0	0	0	0	0	0	0	0	428
Patents By Year of Application:	406	16	5	1	0	0	0	0	0	0	0	0	0	0	0	428

INTERNATIONAL STANDARD ELECTRIC CORPORATION(ITT CORP. UNIT)

Patents By Year of Grant:	399	28	1	0	0	0	0	0	0	0	0	0	0	0	0	428
Patents By Year of Application:	428	0	0	0	0	0	0	0	0	0	0	0	0	0	0	428

STANFORD UNIVERSITY, LELAND JUNIOR, THE BOARD OF TRUSTEES OF

Patents By Year of Grant:	82	20	27	25	14	25	13	22	29	26	23	23	33	27	37	426
Patents By Year of Application:	132	15	23	21	17	16	30	28	26	26	31	36	20	5	0	426

EMERSON ELECTRIC CO.

Patents By Year of Grant:	130	18	10	14	33	15	18	14	15	17	18	22	33	36	29	422
Patents By Year of Application:	156	10	26	16	25	14	15	25	20	15	31	41	20	8	0	422

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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MATSUSHITA ELECTRIC WORKS, LTD.

Patents By Year of Grant:	126	29	18	26	21	21	16	15	20	21	18	16	20	28	27	422
Patents By Year of Application:	170	18	22	23	23	15	16	21	23	17	19	30	15	10	0	422

AMPEX CORP.

Patents By Year of Grant:	223	30	35	23	23	20	15	6	3	14	2	6	9	2	6	417
Patents By Year of Application:	290	25	23	20	13	5	13	3	5	5	8	5	2	0	0	417

KOITO MANUFACTURING COMPANY LIMITED

Patents By Year of Grant:	6	6	11	30	27	26	32	18	19	36	41	33	38	39	52	414
Patents By Year of Application:	19	11	35	25	20	40	15	35	44	41	47	35	39	8	0	414

SYMBOL TECHNOLOGIES, INC.

Patents By Year of Grant:	9	1	3	8	3	10	23	30	32	39	43	43	61	61	47	413
Patents By Year of Application:	13	3	9	12	17	29	36	30	47	60	60	62	27	8	0	413

UNITED MICROELECTRONICS CORPORATION

Patents By Year of Grant:	0	0	0	0	1	0	3	2	7	37	56	74	82	76	73	411
Patents By Year of Application:	0	0	0	1	2	2	3	16	60	88	89	61	67	22	0	411

CYPRESS SEMICONDUCTOR CORP.

Patents By Year of Grant:	0	2	3	5	7	3	3	3	5	16	16	45	94	106	100	408
Patents By Year of Application:	3	3	6	8	1	4	6	12	24	64	94	117	47	19	0	408

ALLEN-BRADLEY COMPANY

Patents By Year of Grant:	126	8	11	17	19	18	19	18	26	26	40	45	25	4	0	402
Patents By Year of Application:	145	20	12	22	23	17	28	22	32	45	29	6	1	0	0	402

CHRYSLER MOTORS CORPORATION

Patents By Year of Grant:	43	16	17	18	33	20	9	11	19	25	31	24	53	52	28	399
Patents By Year of Application:	71	14	39	14	16	14	16	27	30	33	54	46	25	0	0	399

VARIAN ASSOCIATES, INC.

Patents By Year of Grant:	207	18	23	20	18	11	16	10	10	19	5	17	19	4	1	398
Patents By Year of Application:	239	19	22	17	13	12	10	11	11	12	26	6	0	0	0	398

GENERAL INSTRUMENT CORPORATION

Patents By Year of Grant:	72	15	15	19	13	23	39	27	22	20	21	29	30	25	24	394
Patents By Year of Application:	101	14	14	25	27	34	32	18	27	32	34	25	7	4	0	394

NORTHROP GRUMMAN CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	7	23	64	50	109	80	59	392
Patents By Year of Application:	5	0	2	2	3	1	5	19	43	90	75	91	49	7	0	392

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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LICENTIA PATENT-VERWALTUNGS-GMBH

Patents By Year of Grant:	304	14	15	11	14	7	3	5	2	2	5	2	1	3	0	388
Patents By Year of Application:	334	10	12	8	6	4	3	1	5	2	3	0	0	0	0	388

E. I. DU PONT DE NEMOURS AND COMPANY

Patents By Year of Grant:	98	17	11	31	34	42	37	16	28	21	18	5	11	6	10	385
Patents By Year of Application:	129	24	30	41	41	24	25	21	15	14	6	5	9	1	0	385

RAYCHEM CORPORATION

Patents By Year of Grant:	99	31	21	33	21	20	23	14	17	15	10	19	31	15	3	372
Patents By Year of Application:	149	21	35	19	21	16	19	16	10	28	21	15	2	0	0	372

CALIFORNIA INSTITUTE OF TECHNOLOGY

Patents By Year of Grant:	48	10	9	29	13	19	17	15	23	24	10	18	35	45	50	365
Patents By Year of Application:	69	22	26	8	23	10	26	28	13	25	39	38	30	8	0	365

ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE

Patents By Year of Grant:	0	0	0	0	0	5	2	6	5	11	20	38	89	96	90	362
Patents By Year of Application:	0	0	0	4	3	5	5	5	42	36	95	107	58	2	0	362

HAMAMATSU PHOTONICS KABUSHIKI KAISHA

Patents By Year of Grant:	4	12	11	29	40	34	23	18	18	19	43	37	26	37	10	361
Patents By Year of Application:	31	14	36	31	36	18	23	23	34	39	26	46	4	0	0	361

MOBIL OIL CORP.

Patents By Year of Grant:	193	29	25	36	25	14	11	9	5	1	5	2	3	1	2	361
Patents By Year of Application:	234	28	27	15	17	16	8	3	2	8	1	0	1	1	0	361

AMP INCORPORATED

Patents By Year of Grant:	172	30	30	34	23	36	19	7	0	0	0	0	0	0	0	351
Patents By Year of Application:	229	29	28	26	26	12	1	0	0	0	0	0	0	0	0	351

PICKER INTERNATIONAL, INC.

Patents By Year of Grant:	3	20	26	29	28	24	17	18	32	17	28	27	19	19	43	350
Patents By Year of Application:	47	20	34	31	17	16	23	26	27	24	21	30	31	3	0	350

TEAC CORPORATION

Patents By Year of Grant:	15	26	17	26	19	19	28	35	44	29	24	17	11	23	17	350
Patents By Year of Application:	55	25	25	17	32	38	28	26	32	25	12	23	8	4	0	350

MCI COMMUNICATIONS CORP.

Patents By Year of Grant:	0	0	0	0	0	0	1	3	1	4	10	32	116	105	73	345
Patents By Year of Application:	0	0	0	0	2	2	3	4	5	83	137	79	30	0	0	345

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	Pre															
	1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL

ALTERA CORPORATION

Patents By Year of Grant:	2	2	1	3	6	2	9	14	17	12	37	28	48	65	95	341
Patents By Year of Application:	5	2	7	2	5	11	14	24	23	46	54	78	51	18	1	341

AISIN SEIKI KABUSHIKI KAISHA

Patents By Year of Grant:	63	16	24	32	36	36	20	10	14	10	14	10	9	29	17	340
Patents By Year of Application:	100	28	38	30	32	14	7	8	13	15	13	19	15	8	0	340

CLARION CO., LTD.

Patents By Year of Grant:	139	21	18	29	19	22	30	19	17	5	10	4	3	1	3	340
Patents By Year of Application:	174	25	22	18	31	22	19	9	8	5	2	2	2	1	0	340

TRIMBLE NAVIGATION, LTD.

Patents By Year of Grant:	0	0	1	1	1	0	4	7	14	22	33	44	61	70	76	334
Patents By Year of Application:	1	0	1	2	0	6	15	28	42	42	63	84	39	11	0	334

FUJI PHOTO OPTICAL CO. LTD.

Patents By Year of Grant:	83	11	5	2	1	3	3	13	19	14	27	34	48	26	43	332
Patents By Year of Application:	98	2	2	0	4	5	19	19	27	30	37	56	17	15	1	332

SCIENTIFIC-ATLANTA, INC.

Patents By Year of Grant:	17	10	7	15	13	20	11	39	35	32	25	17	28	28	27	324
Patents By Year of Application:	42	5	21	19	22	28	35	31	25	28	26	26	12	4	0	324

DENSO CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	41	130	152	323
Patents By Year of Application:	0	0	0	0	0	0	0	0	0	45	116	119	42	1	1	323

ADVANTEST CORP.

Patents By Year of Grant:	2	2	5	7	7	4	11	16	10	13	16	34	69	66	57	319
Patents By Year of Application:	8	3	11	4	10	19	8	13	18	36	63	74	48	4	0	319

SILICON GRAPHICS, INC.

Patents By Year of Grant:	0	0	3	0	1	3	2	14	12	11	33	39	82	54	65	319
Patents By Year of Application:	3	1	2	5	2	11	14	30	15	67	84	61	21	3	0	319

LUCAS INDUSTRIES PUBLIC LTD. COMPANY

Patents By Year of Grant:	192	13	5	13	4	17	9	4	6	9	6	10	12	10	7	317
Patents By Year of Application:	213	9	7	10	10	9	6	6	13	7	6	14	3	4	0	317

GRUMMAN AEROSPACE CORPORATION

Patents By Year of Grant:	67	15	25	24	33	38	40	21	14	20	9	6	2	0	0	314
Patents By Year of Application:	108	19	40	27	38	27	16	15	22	1	1	0	0	0	0	314

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Pre

1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

STORAGE TECHNOLOGY CORPORATION

Patents By Year of Grant:	56	6	3	9	10	13	13	20	30	31	26	15	13	25	42	312
Patents By Year of Application:	63	7	11	9	23	30	24	31	29	10	13	31	22	9	0	312

3COM CORPORATION

Patents By Year of Grant:	1	0	1	1	0	1	0	2	7	14	19	22	34	80	129	311
Patents By Year of Application:	1	2	0	1	0	3	14	9	18	36	38	111	68	10	0	311

AGFA-GEVAERT N.V.

Patents By Year of Grant:	35	5	7	3	3	12	12	12	21	22	36	25	54	35	26	308
Patents By Year of Application:	47	3	4	4	15	14	16	23	33	39	48	31	26	5	0	308

SINGER COMPANY

Patents By Year of Grant:	279	14	13	1	0	0	0	0	0	0	0	0	0	0	0	307
Patents By Year of Application:	302	5	0	0	0	0	0	0	0	0	0	0	0	0	0	307

ELECTRIC POWER RESEARCH INSTITUTE, INC.

Patents By Year of Grant:	151	3	8	13	6	7	9	12	24	20	14	17	12	9	1	306
Patents By Year of Application:	160	9	10	11	4	18	20	22	18	15	11	6	2	0	0	306

MATSUSHITA ELECTRONICS CORPORATION

Patents By Year of Grant:	52	6	6	10	6	3	16	11	5	17	14	15	39	48	52	300
Patents By Year of Application:	64	7	9	4	14	8	9	14	16	18	41	41	46	9	0	300

PATENT-TREUHAND-GESELLSCHAFT FUR ELEKTRISCHE GLUHLAMPEN MBH

Patents By Year of Grant:	67	10	18	10	8	11	11	10	11	16	18	22	32	25	30	299
Patents By Year of Application:	84	19	6	11	7	22	9	13	12	30	27	25	24	10	0	299

MCDONNELL DOUGLAS CORP.

Patents By Year of Grant:	82	10	9	6	13	17	4	16	6	13	18	15	38	29	22	298
Patents By Year of Application:	101	6	16	10	14	10	10	6	18	17	36	32	19	3	0	298

DAIMLER-BENZ AKTIENGESELLSCHAFT

Patents By Year of Grant:	46	5	13	15	10	15	14	14	16	20	20	30	40	30	8	296
Patents By Year of Application:	64	7	16	15	9	21	15	17	30	32	34	30	5	1	0	296

HUGHES ELECTRONIC DEVICES CORPORATION

Patents By Year of Grant:	1	0	0	0	0	0	0	0	0	29	165	97	2	1	295	
Patents By Year of Application:	1	0	1	2	0	0	2	6	45	112	122	4	0	0	0	295

TANDEM COMPUTERS INCORPORATED

Patents By Year of Grant:	12	15	15	26	12	13	5	12	22	18	22	21	46	35	18	292
Patents By Year of Application:	46	26	8	18	7	11	21	16	21	55	25	29	7	2	0	292

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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NATIONAL RESEARCH DEVELOPMENT CORPORATION

Patents By Year of Grant:	189	21	15	22	19	11	12	1	1	0	0	0	0	0	0	291
Patents By Year of Application:	231	17	16	11	10	5	0	0	1	0	0	0	0	0	0	291

NIPPON STEEL CORP.

Patents By Year of Grant:	37	7	5	3	4	8	18	18	31	33	28	28	38	19	14	291
Patents By Year of Application:	49	2	3	5	19	26	27	23	34	36	34	25	7	1	0	291

GOULD INC.

Patents By Year of Grant:	237	12	13	6	6	4	5	4	3	0	0	0	0	0	0	290
Patents By Year of Application:	264	2	6	4	4	5	2	3	0	0	0	0	0	0	0	290

HUGHES ELECTRONICS CORP.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	2	1	67	102	118	1	290
Patents By Year of Application:	0	0	0	0	1	0	1	0	7	20	73	104	58	25	1	290

ASEA AKTIEBOLAG

Patents By Year of Grant:	250	18	7	13	1	0	0	0	0	0	0	0	0	0	0	289
Patents By Year of Application:	276	12	1	0	0	0	0	0	0	0	0	0	0	0	0	289

SECRETARY OF STATE FOR DEFENCE IN HER BRITANNIC MAJESTY'S GOVERNMENT OF THE UNITED KINGDOM

Patents By Year of Grant:	101	11	6	12	8	18	7	15	13	17	16	11	18	14	22	289
Patents By Year of Application:	132	6	9	11	14	12	13	18	11	15	17	15	15	1	0	289

NGK INSULATORS LTD.

Patents By Year of Grant:	27	10	12	18	18	14	21	21	21	16	19	22	21	21	24	285
Patents By Year of Application:	42	19	13	22	19	24	17	17	25	31	23	18	11	4	0	285

FRANCE TELECOM

Patents By Year of Grant:	0	0	0	0	0	0	2	13	38	29	38	28	56	43	31	278
Patents By Year of Application:	0	0	0	0	0	17	28	39	35	43	51	44	20	1	0	278

WESTERN ATLAS INTERNATIONAL, INC.

Patents By Year of Grant:	0	5	15	22	15	6	11	11	13	20	33	27	37	28	34	277
Patents By Year of Application:	28	12	14	7	7	11	17	17	17	39	35	42	29	2	0	277

DALLAS SEMICONDUCTOR CORPORATION

Patents By Year of Grant:	0	4	4	15	25	24	21	24	14	7	29	24	29	26	27	273
Patents By Year of Application:	5	7	36	27	33	17	11	13	24	31	25	19	19	6	0	273

DATA GENERAL CORP.

Patents By Year of Grant:	157	23	13	10	13	8	4	2	8	4	2	6	6	13	4	273
Patents By Year of Application:	202	7	8	11	3	1	7	4	2	6	13	6	3	0	0	273

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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COOPER INDUSTRIES INC.

Patents By Year of Grant:	42	15	17	21	29	16	14	17	13	13	19	17	22	9	8	272
Patents By Year of Application:	67	22	20	26	15	15	18	21	12	18	21	9	6	2	0	272

GENERAL SIGNAL CORPORATION

Patents By Year of Grant:	133	10	12	17	17	20	6	5	5	11	3	5	19	6	2	271
Patents By Year of Application:	157	11	16	21	11	7	5	4	6	9	16	4	4	0	0	271

LOCKHEED MARTIN CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	10	31	58	75	95	269	
Patents By Year of Application:	10	1	2	2	0	1	0	4	9	39	57	57	60	27	0	269

QUANTUM CORP. (CA)

Patents By Year of Grant:	0	0	0	0	0	1	4	14	13	35	38	28	49	34	43	259
Patents By Year of Application:	0	0	1	0	4	14	20	22	40	39	45	42	24	8	0	259

BENDIX CORPORATION(NOW ALLIED-SIGNAL INC.)

Patents By Year of Grant:	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257
Patents By Year of Application:	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257

KABUSHIKI KAISHA DAINI SEIKOSHA

Patents By Year of Grant:	249	6	2	0	0	0	0	0	0	0	0	0	0	0	0	257
Patents By Year of Application:	257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	257

EMC CORPORATION

Patents By Year of Grant:	1	0	0	0	1	0	1	4	2	5	23	21	57	65	74	254
Patents By Year of Application:	1	0	1	0	7	0	2	5	29	47	60	72	24	6	0	254

SEIKOSHA CO., LTD.

Patents By Year of Grant:	44	19	15	26	25	32	33	18	17	15	7	1	1	0	0	253
Patents By Year of Application:	75	20	26	35	32	22	20	15	3	5	0	0	0	0	0	253

ITT INDUSTRIES, INC.

Patents By Year of Grant:	205	18	5	2	0	0	0	0	0	1	1	14	2	1	0	249
Patents By Year of Application:	227	1	2	0	0	0	0	0	0	1	15	3	0	0	0	249

WHITAKER CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	4	42	29	33	27	41	35	38	249
Patents By Year of Application:	0	0	0	0	2	6	24	36	34	32	37	49	24	5	0	249

NGK SPARK PLUG CO., LTD.

Patents By Year of Grant:	24	19	8	11	14	10	13	8	18	19	20	6	26	29	23	248
Patents By Year of Application:	51	5	12	12	12	13	19	12	24	15	19	32	20	2	0	248

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	Pre															
	1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL

BELL ATLANTIC NETWORK SERVICES, INC.

Patents By Year of Grant:	0	0	0	0	0	3	4	10	6	13	25	46	63	32	43	245
Patents By Year of Application:	0	0	0	0	5	12	9	7	25	94	39	41	11	2	0	245

NORITSU KOKI CO., LTD.

Patents By Year of Grant:	10	3	8	2	1	0	0	0	4	32	20	39	58	36	32	245
Patents By Year of Application:	12	11	1	0	0	0	0	7	48	51	50	38	22	5	0	245

ILLINOIS TOOL WORKS INC.

Patents By Year of Grant:	82	8	7	3	10	6	11	8	6	6	11	14	14	11	45	242
Patents By Year of Application:	94	5	5	8	11	12	3	5	17	12	11	17	26	16	0	242

RCA LICENSING CORPORATION

Patents By Year of Grant:	0	0	70	63	53	46	3	3	0	0	1	0	0	0	0	239
Patents By Year of Application:	38	67	47	58	25	2	1	0	0	1	0	0	0	0	0	239

ALCATEL THOMSON FAISCEAUX HERTZIENS

Patents By Year of Grant:	3	9	10	13	2	1	1	0	0	0	0	0	0	34	165	238
Patents By Year of Application:	20	12	7	0	0	0	0	0	0	1	4	62	117	15	0	238

MICRON ELECTRONICS, INC.

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	2	11	21	87	117	238
Patents By Year of Application:	0	0	0	0	0	0	0	2	2	8	33	139	47	7	0	238

ORACLE CORPORATION

Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	3	8	7	58	85	77	238
Patents By Year of Application:	0	0	0	0	0	0	3	1	7	19	70	112	22	4	0	238

TOKYO ELECTRON LIMITED

Patents By Year of Grant:	1	0	0	7	9	12	20	10	13	15	23	29	27	31	39	236
Patents By Year of Application:	1	1	10	12	20	15	6	19	32	23	27	38	27	5	0	236

WINBOND ELECTRONICS CORP.

Patents By Year of Grant:	0	0	0	0	0	0	0	4	3	5	12	14	40	75	83	236
Patents By Year of Application:	0	0	0	0	0	4	4	3	12	12	44	60	79	18	0	236

GTE AUTOMATIC ELECTRIC LABORATORIES INCORPORATED

Patents By Year of Grant:	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
Patents By Year of Application:	235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235

KABUSHIKI KAISHA KAWAI GAKKI SEISAKUSHO

Patents By Year of Grant:	67	7	0	3	7	5	10	23	28	30	12	14	10	14	5	235
Patents By Year of Application:	74	5	3	5	10	16	29	31	18	13	13	10	7	1	0	235

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Pre

1987 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 TOTAL

DISCOVISION ASSOCIATES

Patents By Year of Grant:	67	7	9	5	2	3	2	2	3	5	17	23	37	26	26	234
Patents By Year of Application:	89	3	0	1	1	2	1	8	14	74	5	30	5	1	0	234

MAZDA MOTOR CORPORATION

Patents By Year of Grant:	17	9	6	8	19	14	16	26	25	23	14	17	16	14	10	234
Patents By Year of Application:	32	6	19	15	20	25	21	29	25	15	9	12	4	2	0	234

SUWA SEIKOSHA CO., LTD.

Patents By Year of Grant:	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233
Patents By Year of Application:	233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233

CSELT - CENTRO STUDI E LABORATORI TELECOMUNICAZIONI S.P.A.

Patents By Year of Grant:	120	16	9	14	7	6	9	4	4	4	10	7	10	5	6	231
Patents By Year of Application:	146	9	7	9	8	4	5	2	9	11	10	4	6	1	0	231

BULL HN INFORMATION SYSTEMS INC.

Patents By Year of Grant:	0	0	0	16	26	15	25	27	26	18	19	18	12	12	13	227
Patents By Year of Application:	9	16	18	37	29	22	20	16	16	12	11	15	6	0	0	227

AMOCO CORPORATION

Patents By Year of Grant:	41	7	28	27	30	24	20	21	11	0	6	2	6	3	0	226
Patents By Year of Application:	75	23	23	27	20	27	12	2	4	7	5	1	0	0	0	226

APPLIED MATERIALS, INC.

Patents By Year of Grant:	3	0	5	3	2	5	5	6	6	11	22	19	44	47	48	226
Patents By Year of Application:	9	2	0	3	5	7	6	11	21	32	47	46	27	9	1	226

HUBBELL INCORPORATED

Patents By Year of Grant:	0	6	7	7	13	10	9	19	16	30	9	21	20	25	32	224
Patents By Year of Application:	9	7	7	16	9	17	21	23	17	25	22	23	23	5	0	224

ROBERTSHAW CONTROLS COMPANY

Patents By Year of Grant:	113	10	8	7	11	7	12	12	11	12	8	6	3	1	3	224
Patents By Year of Application:	128	4	14	5	11	8	16	11	13	7	4	0	3	0	0	224

PERKIN-ELMER CORPORATION

Patents By Year of Grant:	122	24	15	17	8	7	4	4	5	3	3	3	2	2	4	223
Patents By Year of Application:	158	14	9	6	9	6	5	1	4	4	2	4	1	0	0	223

NORAND CORPORATION

Patents By Year of Grant:	7	3	4	6	9	8	7	16	22	14	33	27	33	29	4	222
Patents By Year of Application:	19	2	8	11	12	7	22	17	34	49	25	16	0	0	0	222

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Ranked List of Organizations with 200 or More Patents

	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
STMICROELECTRONICS, INC.																
Patents By Year of Grant:	0	0	0	0	0	0	0	0	0	0	0	0	33	93	94	220
Patents By Year of Application:	0	0	0	0	0	1	1	2	5	9	45	98	43	15	1	220
TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.																
Patents By Year of Grant:	0	0	0	0	0	0	1	1	0	3	12	22	54	70	57	220
Patents By Year of Application:	0	0	0	0	0	2	0	0	5	19	46	78	39	31	0	220
BULL S.A.																
Patents By Year of Grant:	0	1	7	17	10	9	14	25	16	15	25	19	25	20	15	218
Patents By Year of Application:	12	11	6	22	17	18	18	21	21	20	24	24	4	0	0	218
DAI NIPPON PRINTING CO. LTD																
Patents By Year of Grant:	6	0	0	0	1	0	1	7	18	18	31	22	33	38	38	213
Patents By Year of Application:	6	0	0	2	0	8	19	16	26	40	38	25	27	6	0	213
NIPPON SOKEN, INC.																
Patents By Year of Grant:	138	28	9	4	5	5	1	0	3	2	1	3	7	3	3	212
Patents By Year of Application:	176	2	5	3	3	1	3	1	2	6	6	2	1	1	0	212
WANG LABORATORIES, INC.																
Patents By Year of Grant:	34	16	22	19	23	13	22	14	13	14	11	5	2	3	0	211
Patents By Year of Application:	85	20	18	16	16	15	7	14	12	4	3	1	0	0	0	211
EMHART INDUSTRIES, INC.																
Patents By Year of Grant:	110	22	18	28	18	8	4	0	1	0	0	0	0	0	0	209
Patents By Year of Application:	144	24	19	13	7	2	0	0	0	0	0	0	0	0	0	209
SANKYO SEIKI MFG. CO., LTD.																
Patents By Year of Grant:	24	6	2	6	11	9	8	14	12	16	17	26	24	18	16	209
Patents By Year of Application:	33	4	5	16	7	7	21	21	15	25	21	14	18	2	0	209
SIEMENS ENERGY & AUTOMATION, INC.																
Patents By Year of Grant:	7	9	5	8	13	6	6	8	12	16	19	18	28	27	27	209
Patents By Year of Application:	18	2	20	7	5	9	13	16	26	17	30	18	18	10	0	209
AGENCY OF INDUSTRIAL SCIENCE & TECHNOLOGY																
Patents By Year of Grant:	65	5	12	11	16	14	16	8	7	14	6	9	13	7	5	208
Patents By Year of Application:	78	14	15	18	12	10	4	11	14	7	12	8	3	2	0	208
FURUKAWA ELECTRIC CO., LTD.																
Patents By Year of Grant:	9	3	2	6	10	7	12	18	28	21	24	7	19	27	15	208
Patents By Year of Application:	15	1	12	9	8	19	26	23	23	18	17	31	5	1	0	208

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	Pre 1987	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	TOTAL
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OMRON CORPORATION

Patents By Year of Grant:	0	0	0	0	0	16	18	26	19	17	23	15	36	19	19	208
Patents By Year of Application:	0	0	0	5	33	28	26	17	18	24	29	19	6	3	0	208

TOKAI RIKA DENKI SEISAKUSHO K.K.

Patents By Year of Grant:	61	7	11	13	6	11	11	9	6	8	13	16	16	9	11	208
Patents By Year of Application:	77	9	7	11	13	8	9	9	16	10	17	14	1	7	0	208

FAIRCHILD CAMERA AND INSTRUMENT CORPORATION

Patents By Year of Grant:	182	8	8	4	4	0	1	0	0	0	0	0	0	0	0	207
Patents By Year of Application:	201	3	2	0	1	0	0	0	0	0	0	0	0	0	0	207

INTEGRATED DEVICE TECHNOLOGY, INC.

Patents By Year of Grant:	0	1	5	1	4	5	9	5	9	12	19	19	51	41	26	207
Patents By Year of Application:	5	1	2	5	14	10	7	8	13	33	39	46	19	5	0	207

CORNING INCORPORATED

Patents By Year of Grant:	56	2	6	4	7	5	6	13	12	16	9	17	12	17	21	203
Patents By Year of Application:	62	4	5	5	6	10	17	15	15	18	5	21	13	7	0	203

TEXACO INC.

Patents By Year of Grant:	119	10	10	7	13	8	5	5	4	7	6	5	2	1	1	203
Patents By Year of Application:	141	6	8	10	5	5	4	7	9	6	2	0	0	0	0	203

SOCIETE NATIONALE INDUSTRIELLE AEROSPATIALE

Patents By Year of Grant:	41	3	7	10	14	9	12	9	14	15	13	17	15	11	11	201
Patents By Year of Application:	49	9	13	9	17	8	13	15	18	15	17	11	5	2	0	201

E-SYSTEMS, INC.

Patents By Year of Grant:	93	8	6	6	7	7	7	7	5	19	14	8	11	2	0	200
Patents By Year of Application:	106	5	9	8	6	6	13	13	5	21	3	4	1	0	0	200

UNITED TECHNOLOGIES AUTOMOTIVE, INC.

Patents By Year of Grant:	10	10	7	11	6	7	5	11	9	10	15	15	40	42	2	200
Patents By Year of Application:	21	11	7	7	8	12	7	14	12	27	30	36	8	0	0	200

Other Organizations (38531)

Patents By Year of Grant:	42427	6835	6412	8203	7000	7563	7301	7756	8271	8700	9808	9745	14601	15373	17228	177223
Patents By Year of Application:	55278	6641	7229	7749	8010	8272	8370	9045	10585	12702	14095	15718	10047	3397	85	177223